LISTING OF CLAIMS

1. (currently amended) A magnetic inertial force generator comprising:

a shell internally defining an armature chamber having an axis;

at least two circumferential electric coils spaced axially within the chamber;

an armature supported in the chamber for reciprocation on the axis, the armature including at least two axially spaced permanent magnets mounted on an axially extending exterior of an axially extending ~~steel~~ magnetic core that supports the magnets over approximately their full axial lengths;

resilient members nominally centering the armature in the chamber;

the permanent magnets extending axially, inwardly adjacent and in general alignment with the electric coils;

the magnets having radially extending flux lines passing through the coils and the magnets and maintaining a continuous flux path between the magnets and the core through the mounting of the magnets on the axially extending exterior of the magnetic core over the approximately full lengths of the magnets ; and

controlled energizing of the coils being operative on the permanent magnets to reciprocate the armature axially in a controlled manner relative to the shell to develop an opposite alternating inertia force on the shell for application to a connected body.

2. (currently amended) A magnetic inertial force generator as in claim 1 wherein the magnets are cylindrical and the core is a steel tube ~~which supports the magnets over approximately their full axial lengths~~.

3. (currently amended) A magnetic inertial force generator as in claim 2 wherein the resilient members are compression springs.

4. (currently amended) A magnetic inertial force generator as in claim 2 wherein the shell is part of a housing including non-magnetic ends closing the chamber.

5. (currently amended) A magnetic inertial force generator as in claim 2 wherein the shell is formed of material which carries magnetic flux.

6. (currently amended) A magnetic inertial force generator as in claim 5 wherein the shell material is carbon steel.

7. (currently amended) A magnetic inertial force generator as in claim 2 wherein the armature has end caps formed of a non-magnetic material.

8. (currently amended) A magnetic inertial force generator as in claim 2 wherein the magnets are formed of a suitable magnetic material.

9. (currently amended) A magnetic inertial force generator as in claim 8 wherein the magnetic material is ferrite.

10. (currently amended) A magnetic inertial force generator as in claim 2 wherein the magnets are radially magnetized in opposite directions.

11. (currently amended) A magnetic inertial force generator as in claim 2 wherein the coils are wound in opposite directions.

12. (currently amended) A magnetic inertial force generator as in claim 2 wherein the axial length of the coils is generally similar to the axial length of the magnets.

13. (currently amended) A magnetic inertial force generator comprising:

a shell internally defining an armature chamber having an axis;

at least two circumferential electric coils spaced axially and fixed within the chamber;

an armature supported in the chamber for reciprocation on the axis, the armature including at least two axially spaced cylindrical permanent magnets fixedly mounted on an axially extending cylindrical exterior of an axially extending magnetic tube that supports the magnets over approximately their full axial lengths;

resilient members nominally centering the armature in the chamber;

the permanent magnets extending axially, inwardly adjacent and in general alignment with the electric coils;

the magnets being radially magnetized and generating radially extending flux lines passing through the coils and the magnets and maintaining a continuous flux path between the magnets and the tube through the mounting of the magnets on the axially extending cylindrical exterior of the magnetic core over the approximately full lengths of the cylindrical magnets; and

controlled energizing of the coils being operative on the permanent magnets to reciprocate the armature axially in a controlled manner relative to the shell to develop an opposite alternating inertia force on the shell for application to a connected body.

14. (currently amended) A magnetic inertial force generator as in claim 13 wherein the shell is part of a housing including non-magnetic ends closing the chamber.

15. (currently amended) A magnetic inertial force generator as in claim 13 wherein the shell is formed of material which carries magnetic flux.

17. (currently amended) A magnetic inertial force generator as in claim 13 wherein the armature has end caps formed of a non-magnetic material.

18. (currently amended) A magnetic inertial force generator as in claim 13 wherein the magnets are radially magnetized in opposite directions.

19. (currently amended) A magnetic inertial force generator as in claim 13 wherein the coils are wound in opposite directions.

20. (currently amended) A magnetic inertial force generator as in claim 13 wherein the axial length of the coils is generally similar to the axial length of the magnets ~~and the magnetic tube supports the magnets over approximately their full axial lengths~~.